# NSF Research Experience for Undergraduates in Polymer Science

### David A. Schiraldi, Case Western Reserve Univ., DMR-0353119

The broad field of polymer science offers young scholars the opportunity to blend chemistry, physics and engineering principles, targeting real world products and emerging fundamental concepts. Twenty four participants in the CWRU Polymer Science REU conducted independent research projects, under the daily mentorship of PhD students/postdoctoral fellows, as part of eight faculty research groups.



**CWRU Sophomore Eric Giles, final presentation** 



**CWRU REU Class of 2004** 

Ten NSF-supported students from Fisk Univ., SUNY Fredonia, Rose-Hulman Inst. of Tech., Ohio Northern Univ., Rochester Inst. of Tech., and Claflin College were joined by fourteen CWRU undergraduates who were supported by a range of corporate, foundation, governmental and internal funds. Research ranged from molecular simulations to organic synthesis, tribology, and structure-property relationships.

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Regional Symposium at U. Akron

### **Education:**

In addition to conducting a significant research project, students participated in seminar-style classes on cutting-edge areas of polymers, lab safety, and engineering ethics. Students had the opportunity to meet both CWRU faculty, and visitors, including 2000 Nobel Prize winner Alan J. Heeger, who met with the undergraduates in an informal session. Students refined their communication skills, presenting research results three times during the summer, including at a regional symposium held in conjunction with the University of Akron REU program.

Students were housed in the same complex, with social activities ranging from team sports, picnic/beach trips, and amusement park and spectator sport outings. These student-driven initiatives reinforced other daily team building activities.

#### **Outreach:**

This REU is focused on creating opportunities in research primarily for students who attend non-PhD granting institutions, forming a diverse cadre of individuals that is rich in traditionally underrepresented groups of students.



Group outing to Jacobs Field, July 2004